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ABSTRACT

Undertaken to better understand Mexican American and Anglo students' perceptions of their schcol experience, the study sampled 30 classes in a 462-student junior high school with a 50/46% Hispanic/Anglo racial/ethnic composition and 46 classes in a 696-student high school with a 42/53% Hispanic/Anglc ccmpcsition. Each student in the sampled classes responded to a questionnaire including 18 dimensions measuring teacher concern, teacher punitiveness, teacher authcritarianism, teacher favoritism, teacher enthusiasm, peer esteem, student decision-making, classroom dissonance, student competitiveness, student cliqueness, teacher clarity, student satisfaction, student compliance, student apathy, classroom physical appearance, knowledge of results, task difficulty, and class organization. Analyses of the data indicated that Mexican Americans seemed to have more positive percepticns of their classes in spite of the fact that as a group they had lower achievement than the Anglos at these two schools. The Anglo subgroup perceived more "teacher favoritism" and more "student cliqueness" in the classes than did the Mexican Americans. While the climate scales were more reflective of characteristics of the class than of characteristics of separate subgroups, salient subgroup difference did affect the extent of congruence among members of the class. However, the differences between the two subgroups did not appear to be of a large enough magnitude to help explain the difference that the two groups encounter in the public schools. (NEC)

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# Mexican-American and Anglo Students' Perceptions of Class Climate

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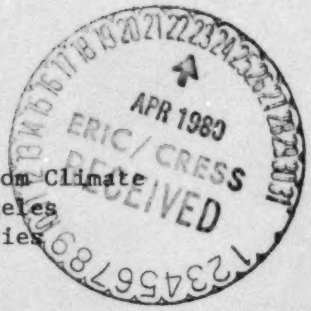


Mexican-American and Anglo Students' Perceptions of Classroom Climate

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The widely held assumption that the disparity in the educational experiences of Mexican-American and Anglo students reflects an incompatibility between the Mexican-American minority and the school system is examined by comparing the socio-psychological perceptions of Mexican-American and Anglo secondary students. These perceptions were collected at a high and junior high school in the southwest which had approximately equal numbers of both groups of students. A class climate measure was used to collect the data. Group means at the classroom level were compared using analysis of variance with a repeated measures factor which permitted a comparison of the two ethnic groups and an examination of the interaction between ethnicity, level of schooling and subject matter.

## Mexican-American and Anglo Students' Perceptions of Classroom Climate*

The problems that Mexican-American students experience in the public schools are significant and well documented--problems evidenced in significantly lower achievement and disproportionately large number of drop-outs (see, for example, the U.S. Commission on Civil Rights, Mexican-American Study, 1971-74). But, in spite of the fact that these problems have received a large amount of attention, their origin and nature are not yet sufficiently understood. This study is an attempt to better understand these problems by examining differences between Mexican-American and Anglo students. This will be done by comparing the two groups' perceptions of the classroom learning environment.

Attempts to identify differences which might lead to the low academic achievement of the Mexican-American minority have focused on numerous variables. Among those examined have been: IQ, alienation, self-concept, motivation, locus of control, cognitive style, and attitude (Hernandez, 1973). Yet, in spite of the number of variables studied, there is little consistency in the outcomes of these studies. The results have been, by and large, inconclusive and sometimes contradictory. While it is beyond the scope of this paper to make a comprehensive review of the literature, two brief examples will be illustrative. First, studies of self-concept made by Coleman (1966) and by Palomares (1966) found that Mexican-American children have lower self-concepts than Anglo children. But, more recent studies by Carter (1968), DeBlassie and Healy (1970), and Cervantes and Bernal (1977) report no significant difference between the two groups.

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Similar results come from studies comparing the motivation of the two groups. Demos (1962) found that Mexican-American children were less highly motivated than Anglos, but Johnson (1970) and Anderson and Johnson (1971) found no significant differences between the two groups.

Another characteristic of most of the studies dealing with Mexican-American students is their focus on the attributes of the individual child. Whether intentional or not, this makes the child the focus of change and tends to define minority students negatively. As Ramirez points out "This tendency to look at the child, his home, and his parents, too frequently has led educators to place culpability at the door of the agents least capable of intervening in behalf of their own self-determination and amelioration" (Ramirez, 1974). He suggests that we "stop disecting students and start taking a closer look at the schools as they respond, or fail to respond, to minority groups" (Ibid.).

Numerous authors have, in fact, asserted that the nature of the school is the cause of the poor performance of the Mexican-American child. Ulibarri, for example, feels that among the reasons for these students' failure are: "the middle class bias for the curriculum and school environment, the lack of socio-cultural sensitivity on the part of the teachers, and the capricious tendency on the part of educators to employ motivational structure and teaching styles totally outside the context of the Mexican-American socio-culture" (Ulibarri, 1974). This same perspective led Cardenas and Cardenas to devise the so called "Theory of Incompatibilities" asserting that the Mexican-American's "lack of success can be attributed to the incompatibilities between the typical instructional program of American schools and the characteristics of the deprived,

minority group population" (Cardenas and Cardenas, 1973).

Felder takes the same point of view and describes the effect on the individual student:

> These (Mexican-American) children take their culturally defined sets of behaviors into the American schools and are confronted immediately with different sets of values and role expectations. It does not take them long to experience defeat and discouragement and to internalize the sense of bewilderment, deficiency, and inferiority (Felder, 1970).

Ulibarri sums up this increasingly common view of the schools by stating that "the regular classroom program has not worked for the Mexican-Americans" (Ulibarri, 1974).

But, even though the school and classroom are now frequently viewed as the source of the problems encountered by Mexican-American students, this view has been promulgated largely through rhetoric rather than through empirical evidence. While it is commonly observed that there are significant differences between the Anglo and Mexican-American subcultures, there does not seem to be empirical evidence that the school and classroom are incompatible with the Mexican-American subculture. In fact, the school is only one of numerous possible causes of the problems encountered by Mexican-American students. In any case, the widely held belief that members of the Mexican-American minority react to their school experience differently from the Anglo-American calls for studies focusing on the environment rather than the individual.

This need for studies focusing on the environment parallels a growing interest in measures of the environment. Randhawa and Fu, (1973). in fact, assert that "the focus of interest in educational measurement is beginning to shift from measures of the individual to measures of the

environment". This shift has been hastened, in part, by the inability of traditional outcome measures to show significant differences in educational programs that are felt to be quite different, and in recognition of the fact that student aptitude, which is the focus of most measurement and the source of the largest amount of variance, cannot be manipulated while the environment, which is also an important source of variance, can be manipulated (Walberg, 1971).

The most common method of measuring the environment has been through climate instruments. These are self-report questionnaires responded to by the participants in an organization. They usually contain "high-inference" questions forming a number of different dimensions. Many of these instruments have been found valid and some have also been found to be reliable predictors of achievement (Neilson and Kirk, 1973).

Research using climate measures in the classroom has found the instruments to be sensitive to differences in such variables as grade level (Yamamoto, Thomas and Karns, 1969; and Walberg, House and Steele, 1973), subject matter (Yamamoto, Thomas and Karns, 1969; Anderson, 1971; Anderson, Walberg and Welch, 1969; and Lawrenz, 1976), sex (Anderson, 1970; Walberg, Sorenson and Fishbach, 1972), class size (Walberg, 1972) and socio-economic status (Walberg, Sorenson and Fischbach, 1972). They have also been used to predict cognitive and affective learning (Walberg, 1968, 1969b; Walberg and Anderson, 1972). And, Lawrenz has shown class climate to be stable over time (1977).

In view of climate instruments' sensitivity to numerous classroom variables and their focus on the class context, they seem to be an especially promising method of comparing Mexican-Americans' and Anglo-Americans'

views of their classroom experience. And, examining climate scores aggregated at the group rather than at the individual level abandons the individual as the unit of analysis in measurement and as the unit of explanation for existing differences. Thus, the focus is placed on group perceptions of school programs--testing empirically whether or not the groups view their classes differently. In addition, previous research has found that climate measures are "extremely sensitive in tapping differences among groups" (Anderson and Walberg, 1974).

While it seems reasonable to use measures of student perceptions of their class climate to compare Mexican-American and Anglo-American students, there have been few attempts to do so. Only four studies were found using measures of the environment to compare these two groups. These were all conducted using university students as respondents. One would assume that at the university level the differences between the two groups would be less pronounced than in the public schools because the Mexican-Americans attending the university would be those who were most successful at adjusting to the schools.

Nonetheless, these four studies did find some differences. The studies are quite similar since they focus on the same level of schooling and use the same climate instrument--the College and University Environment Scales (CUES, Pace, 1969). While the majority of the scales failed to show significant differences between the two groups, Murray's study found the Anglos scoring significantly higher on the scholarship scale. Even so, he found that sex seemed to play a greater role in perceptions than ethnicity (Murray, 1974). Two studies by the same group of researchers (Garza and Nelson, 1973 and Garza and Widlak, 1976) also found group

differences on the scholarship scale. In addition, they found significant group differences on the propriety scale. The final study by Vela found only one dimension showing a significant difference--the practicality scale (Vela, 1977). So, even at the university level, climate measures are capable of discovering differences between the two groups.

## Method

This study was undertaken in an attempt to better understand Mexican-American and Anglo students' perceptions of their school experience. The data for comparing the two groups were taken from the data bank collected by the /I/D/E/A/ Research Division for its Study of Schooling.

### Setting and Subjects

To compare the two groups' perceptions of class climate, it was necessary to locate classes containing members of both groups. There are two schools in /I/D/E/A/'s data bank that have a near balance between Mexican-American and Anglo students. Both are located in the southwestern area of the U.S. They are the junior and senior high schools of a rural district which is situated next to a fairly large city. For purposes of this study, these schools will be called Fairfield Junior and Senior High School. At Fairfield High School, the sampled racial/ethnic composition is 42% Hispanic and 53% Anglo and, at the junior high, it is 50% Hispanic and 46% Anglo. This is based on a sample size of 462 students at the junior high and 696 students at the high school. The socio-economic status of the families sending children to these schools is, on the average, middle to low. The Hispanic families and about 50% of the Anglo families occupy the lower half of the scale used to compute SES.

Procedure

A representative and random sampling of course offerings were taken at each of these schools. Classes were sampled in each of the following subject matter categories: English/language arts, math, social studies, science, arts, foreign language, vocation/career education and physical education. There are a total of 30 sampled classes at the junior high and 46 sampled classes at the high school.

Each student in the sampled classes responded to a questionnaire covering a wide range of questions about the student's school experience. The climate instrument was one part of this questionnaire. The climate instrument contains 113 items and 29 a priori dimensions. The items are similar in type to those found in most climate instruments, although they had to be substantially reworded to make the reading level appropriate for junior high as well as high school students. The instrument also differs from other class climate measures in its attempt to measure a range of instructional practices. These include the a priori dimensions of Appropriate Practice, Time, Goals and Objectives, Knowledge of Results, Perceived Purpose, etc. Analyses of the instrument undertaken since the data collection and have suggested a final form of the instrument consisting of 100 items and 18 dimensions. This form of the instrument will be used for this study * (for further information about instrument development see Sirotnik et al, in press).

Internal consistencies (as measured by alpha coefficients) have been computed for this instrument with the following results for the several larger and major scales: Peer Esteem, .77; Teacher Concern, .85; and Teacher Punitiveness, .74.

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*See Appendix A for a copy of the class climate dimensions.

Since the appropriate unit of analysis for this study was deemed to be the classroom, it was necessary to identify the classrooms at each of the six schools which contained a reasonable balance of Anglo and Mexican-American students. The decision was made to eliminate all classes which did not contain at least five students from each of the two subgroups. This decision reduced the number of classes available for subgroup comparison from 75 to 38 at Fairfield. The number of subject areas which could be included in the study was also reduced by the requirement of at least 5 students from each subgroup in a class. The following subject areas were eliminated: foreign languages, vocational education, and physical education. The number of classes meeting the stated critereon at each school and for each of the remaining subject areas can be found in Table 2.

Table 2. Valid Classes at Each School For The Five Subject Areas

| | Subject Area | | | | | |
|---|---|---|---|---|---|---|
| District | Eng | Math | Social Studies | Science | Art | Total |
| Fairfield High | 5 | 5 | 4 | 3 | 4 | 21 |
| Junior | 2 | 5 | 3 | 4 | 3 | 17 |
| Total | 7 | 10 | 7 | 7 | 7 | 38 |

For each of the valid classes a separate mean for each climate scale was computed for each of the two subgroups within each class. Thus, each class has a Mexican-American and an Anglo score.

Data Analysis

Analysis of variance with repeated measures was determined to be an appropriate analytical procedure for determing the main effect of race/ethnicity while also testing for possible interactions between race/ethnicity, level, and subject area. This design treats each class as a single unit, using the two within class subgroup scores as the repeated measures. This permits a comparison of the two subgroups. The Biomed BMDP2V analysis of variance program (Biomedical Computer Programs, P-Series, 1979) was well suited for this purpose and was used for the necessary calculations.

## RESULTS

The analysis of variance performed on the Hispanic/Anglo data uncovered a few significant main effect differences. There are significant differences between the two subgroups at the .05 level or better for three of the 18 climate scales. The mean differences between the two subgroups for these three scales are reported in Table 3.

Table 3. Hispanic/Anglo Subgroup Means for Climate Scales Having Significant Main Effects for Race/Ethnicity

| Climate Scales | Subgroups | | | | | |
|---|---|---|---|---|---|---|
| | Anglo | | | Hispanic | | |
| | $\bar{X}$ | SD | N | $\bar{X}$ | SD | N |
| Teacher Favoritism | 2.56 | 0.42 | 38 | 2.35 | 0.36 | 38 |
| Student Cliqueness | 2.93 | 0.26 | 38 | 2.70 | 0.26 | 38 |
| Task Difficulty | 2.16 | 0.30 | 38 | 2.29 | 0.28 | 38 |

Table 4 represents a complete ANOVA table for one of these scales--student cliqueness. This table is exemplary of the design used throughout this study to test for subgroup differences. The results for subsequent main and interaction effects will be reported in summary form. Only the results for the within analyses pertain to the comparison of the two subgroups, so only the within analyses will be reported.

TABLE 4

Analysis of Variance for Student Cliqueness

| Source | df | Mean Square | F |
|---|---|---|---|
| Between | | | |
| Level (L) | 1 | 0.351 | 4.66* |
| Subject (S) | 4 | 0.126 | 1.67 |
| L x S | 4 | 0.047 | 0.63 |
| Error (B) | 28 | 0.075 | - |
| Within | | | |
| Race (R) | 1 | 1.069 | 20.84** |
| R x L | 1 | 0.032 | 0.63 |
| R x S | 4 | 0.016 | 0.31 |
| R x L x S | 4 | 0.049 | 0.96 |
| Error (w) | 28 | 0.051 | - |

*$p < .05$

**$p < .001$

The subgroup means indicate that the Anglo students perceive their teachers as showing more "favoritism" ($F=10.94$, $p < .001$) and perceive that there is more "student cliqueness" in the classes than do the Mexican-American students. For the third scale, the Mexican-Americans score higher.

They perceive more "task difficulty" ($F=7.08$, $p < .01$) than do the Anglo students.

Of all of the possible interactions between ethnicity, level, and subject, none were significant at the .05 level or better. And, while it was not possible to expand the repeated measures portion of the design to include ethnicity by sex interactions because of class size imbalances, analyses of variance with a repeated measures factor were computed on the same data using sex as the repeated factor. The design was identical to the one used for ethnicity with the sex variable being substituted for ethnicity. These analyses resulted in five times the significant main and interaction effects as did the earlier computations. The results of these analyses are summarized in Table 5.

Table 5. Significant Results From Within Class Analysis Of Variance Using Sex as the Repeated Factor.

| | Main Effect for Sex | Sex by Level | Sex by Subject | Sex by Level by Subject |
|---|---|---|---|---|
| Teacher Clarity | ** | | | |
| Student Competitiveness | ** | | | |
| Student Satisfaction | ** | | | |
| Student Decision-Making | ** | ** | | |
| Peer Esteem | ** | * | | |
| Class Physical Appearance | ** | ** | | |
| Student Compliance | | ** | | |
| Teacher Concern | | ** | | * |
| Teacher Authoritarianism | | | | * |
| Teacher Favoritism | | | | * |
| Teacher Punitiveness | | | | * |

* $p < .05$
** $p < .01$

It is beyond the scope of this paper to discuss gender differences except where they relate to ethnic differences. And, even though it was not possible to make a direct test for interactions between sex and ethnicity, repeating the same analyses (once for ethnicity and once for sex) allows some conclusions to be drawn about possible interactions. In spite of the many more significant results from the male/female analyses, the main and interactions effects are not found on the same scales as those showing significant results for ethnicity. The one exception is for the Teacher Favoritism scale which has a significant main effect for ethnicity ($p < .001$) and a significant interaction effect for sex by level by subject ($p < .05$). In spite of this, it does not appear that there need be much concern for possible ethnicity by sex interactions.

## DISCUSSION

Considering the critical relationship between race/ethnicity and achievement and the demonstrated ability of class climate scores to predict student and class achievement (Anderson & Walberg, 1969; Walberg & Anderson, 1972; Walberg, 1969), it was anticipated that within classroom subgroups aggregated by race/ethnicity would report differing perceptions of their class climate. Since Anglo students generally have higher achievement, and had significantly higher achievement for this sample (two tailed t-test, $p < .01$), it was anticipated that the Anglo subgroup would view the class climate more positively. However, judging from the analyses of the data from these two schools, that is not the case. Instead, the Mexican-Americans seem to have more positive perceptions of their classes.

While the results obtained from these two schools cannot be generalized to a larger population, they are, nonetheless, interesting. Three of

eighteen scales manifest significant differences between the ethnic subgroups. One of these, Task Difficulty, seeks to determine if the students feel that their classroom tasks are difficult. And, as might be expected considering the problems that Mexican-Americans are reported to have in our public schools, the Mexican-American subgroup perceives the classroom tasks as being more difficult than does the Anglo subgroup.

Both of the other scales for which there are significant subgroup differences are more affective than Task Difficulty. These scales, Teacher Favoritism and Student Cliqueness, are negative scales--the higher the score on the scale, the more negative the perception of the class. Unlike what one might expect, for these two scales the minority subgroup has lower mean scores--hence, more positive perceptions of the class--than does the Anglo subgroup. The Anglo subgroup perceives more "teacher favoritism" and more "student cliqueness" in the classes than does the Mexican-American subgroup in the same classes. Both of these scales focus on student perceptions of favoritism--favoritism from the teacher for one scale and favoritism among students for the other. But it is not clear why the Anglo subgroup feels there is more favoritism than does the Mexican-American subgroup. It would require information about the sample beyond that available from the climate instrument to conclude whether the differences in perceptions were due to the different cultural characteristics of the two groups or to actual treatment observed in the classroom. Nonetheless, one would expect the results to be reversed, with the minority subgroup perceiving more Teacher Favoritism and more Student Cliqueness.

In any case, the differences between the two subgroups are not large and are not in the direction one would expect. The two affective scales which have significant main effects offer evidence that the minority students have more positive perceptions of their classroom experience than do the Anglo students. And, this impression is strengthened if the scales, which are significant at the .10 level, are included. For each of the scales that would be added--Student Decision-Making, Classroom Dissonance and Classroom Physical Appearance--the Mexican-American subgroup has more positive perceptions than the Anglos. Thus, even though the differences between the two groups are minimal, the difference that exist generally show the Mexican-American subgroup to have more positive perceptions of the class than does the Anglo subgroup. This is so in spite of the fact that as a group the Mexican-Americans have lower achievement than the Anglos at these two schools.

In conclusion, subgroups aggregated by race/ethnicity do demonstrate within class differences. This fact seems to offer the possibility of identifying classroom climate dimensions which differentiate different subgroups. However, for this sample the actual differences in subgroup mean scores are not particularly great. Though there are significant differences between the two subgroups, there is certainly more convergence than divergence between the climate scores for the two subgroups. This is true even for the scales displaying significant subgroup differences. It is, no doubt, most reasonable to conclude that, while the climate scales are more reflective of characteristics of the class than of characteristics of separate subgroups, salient subgroup differences do affect the extent of congruence among members of the class. In the case of this sample, however, the differences between the two subgroups do not appear to be of a large enough magnitude to help explain the differences that the two groups encounter in the public schools.

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APPENDIX A
CLASSROOM LEARNING ENVIRONMENT
SECONDARY STUDENTS

Teacher Concern (8)

1. The teacher makes this class enjoyable for me.
4. The teacher listens to me.
13. The teacher lets me express my feelings.
14. I like the teacher in this class.
-17. I wish I had a different teacher for this class.
21. I feel the teacher is honest with me.
22. This teacher is friendly.
24. The teacher is fair to me.

Teacher Punitiveness (6)

2. The teacher makes fun of some students.
6. This teacher hurts my feelings.
7. I'm afraid of this teacher.
9. The teacher punishes me unfairly.
11. The teacher makes fun of me.
16. The teacher gets mad when I ask a question.

Teacher Authoritarianism (8)

19. This teacher is too strict.
45. This teacher treats us like children.
49. This teacher will never admit when he/she is wrong.
56. We don't feel like we have any freedom in this class.
64. This teacher acts like he/she is better than we are.
69. This teacher "talks down" to us.
75. This teacher never changes his/her mind about anything.
82. I don't feel like I have any freedom in this class.

Teacher Favoritism (3)

47. The teacher likes some students in this class better than others.
-50. The teacher has no favorites in this class.
77. The teacher treats smart students in this class better than others.

Teacher Enthusiasm (3)

38. This teacher seems to like being a teacher.
51. This teacher seems to enjoy what he/she is teaching
-60. The teacher seems bored in this classroom.

Peer Esteem (7)

3. I help my classmates with their work.
8. If I am absent, my classmates help me to catch up on what I missed.
10. I like my classmates.
12. I like working with other students in this class.
15. In this class, people care about me.
18. If I had trouble with my work, most of my classmates would help me.
20. My classmates like me.

Student Decision-Making (8)

32. We are free to talk in this class about anything we want.
35. Students help make the rules for this class.
37. We are free to work with anyone we want to in this class.
40. We can decide what we want to learn in this class.
74. Students help decide what we do in this class.
80. Different students can do different things in this class.
91. Sometimes I can study or do things I am interested in even if they are different from what other students are studying or doing.
97. I help decide what I do in this class.

Classroom Dissonance (3)

41. The students in this class fight with each other.
54. The students in this class argue with each other.
107. Students in this class yell at each other.

Student Competitiveness (4)

48. There is a lot of competition in this class.
65. In this class, students compete with each other for good grades.
86. When I'm in this class, I feel I have to do better than other students.
90. Students in this class feel they have to do better than each other.

Student Cliqueness (3)

36. Some groups of students refuse to mix with the rest of the class.
68. Certain students stick together in small groups.
105. When we work in small groups, many students work only with their close friends.

Teacher Clarity (4)

62. The teacher uses words I can understand.
63. The teacher gives clear directions.
95. The students understand what the teacher is talking about.
109. I understand what the teacher is talking about.

Student Satisfaction (4)

96. Students feel good about what happens in class.
-101. I don't like coming to this class.
108. After class, I usually have a sense of satisfaction.
112. I feel good about what happens in this class.

Student Compliance (4)

53. I usually do my homework.
87. I usually do the work assigned in this class.
94. The students in this class usually do the work assigned.
104. I usually do everything my teacher tells me to do.

Student Apathy (4)

29. Failing in this class would not bother most of the students.
-33. Most of the students pay attention to the teacher.
34. Students don't care about what goes on in this class.
67. I don't care about what goes on in this class.

Classroom Physical Appearance (2)

70. The room is bright and comfortable.
111. I like the way this classroom looks.

Instructional Practices: Knowledge of Results (4)

30. The teacher tells us how to correct the mistakes in our work.
42. The teacher tells me how to correct the mistakes in my work.
43. This teacher lets us know when we have not learned something well.
61. We know when we have learned things correctly.

Instructional Practices: Task Difficulty (4)

44. I do not have enough time to do my work for this class.
66. Some of the things the teacher wants us to learn are just to hard.
73. I have trouble reading the books and other materials in this class.
92. The teacher gives me too much work to do in this class.

Instructional Practices: Organization (11)

28. We know exactly what we have to get done in this class.
52. We know why the things we are learning in this class are important.
57. The grades or marks I get in this class help me to learn better.
-58. We don't know what the teacher is trying to get us to learn in this class.
-72. Many students don't know what they're supposed to be doing during class.
-76. This class is disorganized.
-78. The grades or marks I get in this class have nothing to do with what I really know.
-79. We have to learn things without knowing why.
93. Students know the goals of this class.
106. Things are well planned in this class.
113. Our teacher gives us good reasons for learning in this class.